AMENDMENTS TO THE SPECIFICATION

Please insert the following paragraph between the title and Field of the Invention.

CROSS REFERENCE TO RELATED APPLICATIONS

This is a continuation of application serial no. 09/615,446 filed on July 13, 2000, granted _____.

Please replace the Abstract beginning on page 40 with the attached new Abstract.

Please delete the paragraph beginning at page 4, line 21, which starts with "This object is reached."

Please delete the paragraph beginning at page 5, line 12, which starts with "Further preferred embodiments".

Please replace the paragraph beginning at page 5, line 15 with the following amended paragraph:

~~According to claim 4 it~~ It is further advantageous to perform an admission control before delivery deadlines are calculated for payload data packets at a packet scheduler. The decision to admit a real-time processing of a sub-stream of data packets depends on a minimum throughput requirement given by admission control parameters, which can be easily read from an admission control packet ACP. Advantageously, delivery deadline violations for data packets due to throughput lacks can be avoided, because data

packets requiring a higher throughput than available are not admitted for real-time processing. Also, unnecessary calculations of delivery deadlines are avoided.

Please replace the paragraph beginning at page 5, line 25 with the following amended paragraph:

~~According to claim 5 it~~ It is advantageous that the admission control takes into account a maximum throughput parameter Rh. This allows the choice of a more cost-effective throughput than the minimum required throughput R1 for a sub-stream, up to the maximum throughput Rh and in dependence of the available throughput.

Please replace the paragraph beginning at page 6, line 5 with the following amended paragraph:

~~According to claim 6 it~~ It is also advantageous to reject a sub-stream of data packets, [[,]] which is not admitted for real-time processing, and to send it to the packet scheduler, because this allows still a best effort processing. A dropping of data packets and a corresponding loss of information can therefore be avoided.

Please replace the paragraph beginning at page 6, line 10 with the following amended paragraph:

~~According to claim 7 data~~ Data packets that are rejected for real-time processing are sorted at the packet scheduler into a second queue FIFO in their order of appearance. This allows a best-effort processing according to a first in - first out strategy for data packets of the second queue FIFO.

Please replace the paragraph beginning at page 6, line 15 with the following amended paragraph:

~~According to claim 8 data~~ Data packets from the first queue EDF are further processed according to their delivery deadlines, and data packets from the second queue FIFO are processed according to a first in - first out strategy. Advantageously, this puts the further processing of data packets under the established quality of service requirements into action.

Please replace the paragraph beginning at page 6, line 21 with the following amended paragraph:

~~According to claim 9, an~~ An output interface OI prioritises data packets in the first EDF and the second queue FIFO. Advantageously, a blocking of data packets in one queue can be avoided by choice of a priority-strategy, which guaranties to a certain extend read-outs of data packets from both queues.

Please replace the paragraph beginning at page 6, line 26 with the following amended paragraph:

~~According to claim 10, a~~ A throughput capability feedback is sent back along the data packet sub-stream's transmission path via a modified admission control packet. Advantageously, this allows intermediate communications system nodes or a traffic source to adapt the traffic to the available throughput capabilities. In this way, rejections of data packets for real-time processing can be avoided to a high extend. The use of a

modified admission control packet can avoid signalling overhead and a complex protocol structure.

Please replace the paragraph beginning at page 7, line 5 with the following amended paragraph:

~~According to claim 11, synchronisation~~ <u>Synchronisation</u> control parameters are received from a header of an underlying network protocol. This allows payload encryption and authentication, and it supports the use of the so-called Internet protocols IPv4, IPv6 and IPSec, because synchronisation control parameters are not prevented from being read.

Please replace the paragraph beginning at page 7, line 11 with the following amended paragraph:

~~According to claim 12, deadline~~ <u>Deadline</u> violations can be detected. Advantageously, this allows a triggering of countermeasures in order to guarantee the real-time processing of the data packets.

Please replace the paragraph beginning at page 7, line 15 with the following amended paragraph:

~~According to claim 13, a~~ <u>A</u> payload data packet adaptation takes place. This allows the keeping of delivery deadlines for data packets. It supports furthermore an efficient use of the packet scheduler and other system resources, and it can avoid rejection or dropping of data packets.

Please replace the paragraph beginning at page 7, line 20 with the following amended paragraph:

~~According to claim 14, admission~~ Admission control parameters are received from a header of an underlying network protocol. This allows payload encryption and authentication, and it supports the use of the so-called Internet protocols IPv4, IPv6 and IPSec, because admission control parameters are not prevented from being read.

Please replace the paragraph beginning at page 7, line 25 with the following amended paragraph:

~~According to claim 17, a~~ A network node that processes real-time data traffic comprises in addition a determining unit to determine a currently available throughput V, and a decision means for a decision about a real-time processing of an incoming data traffic flow. By means of the determining unit and the decision means it is possible to perform an admission control before deadlines are calculated for payload data packets at a packet scheduler. Advantageously, delivery deadline violations for data packets due to throughput lacks can be avoided, because data packets requiring a higher throughput than available are not admitted for real-time processing. Also, unnecessary calculations of delivery deadlines are avoided.

Please replace the paragraph beginning at page 8, line 6 with the following amended paragraph:

~~According to claim 18, the~~ The network node comprises further a transfer unit to forward data packets that are admitted for real-time processing to the first queue EDF, and to

forward data packets that are rejected for real-time processing to a second queue FIFO. This guaranties that all types of traffic can be processed. Data packets rejected for real-time processing can still be processed with best-effort quality. In addition, an output interface OI prioritises data packets in the first EDF and the second queue FIFO. Advantageously, a blocking of data packets in one queue can be avoided by choice of a priority-strategy, which guaranties to a certain extend read-outs of data packets from both queues.

Please replace the paragraph beginning at page 8, line 17 with the following amended paragraph:

~~According to claim 19, the~~ The network node comprises further a deadline violation handler and an adaptation unit. Therefore, countermeasures against delivery deadline violations can easily be triggered in order to guarantee the real-time processing of the data packets. A preferred countermeasure is the payload data packet adaptation, which allows the keeping of delivery deadlines. It supports furthermore an efficient use of the system resources, and it can avoid a rejection or a dropping of data packets.

Please replace the paragraph beginning at page 8, line 25 with the following amended paragraph:

~~According to claim 20, the~~ The network node comprises further a radio base station. In a cellular communications network, and in particular in a radio access network, the available frequencies are limited resources. This results in limited bandwidths of communications channels. Advantageously, the present invention supports efficiently

the provision of quality of service to clients requesting real-time multimedia services. In particular, the radio base station can accept only those clients, whose communication requests can be fulfilled.

Please replace the paragraph beginning at page 9, line 4 with the following amended paragraph:

~~It is advantageous according to claim 23 that~~ An admission control can easily be performed based on one or more admission control parameters RI read from an admission control packet ACP, which is embedded in a data packet stream. A decision to admit a real-time processing of a sub-stream of data packets depends on a minimum throughput requirement given by said admission control parameters. Advantegeously, congestion due to throughput lacks at network nodes or applications can be avoided, because data packets requiring a higher throughput than available are not admitted for real-time processing. In addition, the admission control can take into account a maximum throughput parameter Rh. Therefore, the admission controller can choose a more cost-effective throughput than the minimum required throughput RI for a sub-stream of data packets, up to the maximum throughput Rh and in dependence of the available throughput.

Please replace the paragraph on page 9, line 26 with the following amended paragraph:

An admission control is performed before deadlines are calculated for payload data packets. There is no need to calculate deadlines, if throughput requirements for a real-

time processing of a sub-stream of data packets that are given by admission control parameters indicate under consideration of available throughput capabilities, that these deadlines cannot be kept. Advantageously, delivery deadline violations for data packets due to throughput lacks can be avoided, because data packets requiring another throughput than available are not admitted for real-time processing.

Please replace the paragraph beginning at page 10, line 6 with the following amended paragraph:

~~According to claim 24, a~~ <u>A</u> throughput capability feedback is sent back along the data packet sub-stream's transmission path via a modified admission control packet. Advantageously, this allows intermediate communications system nodes or a traffic source to adapt the traffic to the available throughput capabilities. In this way, rejections of data packets for real-time processing can be avoided to a high ~~extend~~ <u>extent</u>. The use of a modified admission control packet can also avoid signalling overhead and a complex protocol structure.

Please replace the paragraph beginning at page 10, line 14 with the following amended paragraph:

~~According to claim 25 data~~ <u>Data</u> packets that are rejected for real-time processing are sorted into a second queue FIFO in their order of appearance. This allows an easy best-effort processing according to a first in - first out strategy for these data packets.

Please replace the paragraph beginning at page 10, line 19 with the following amended paragraph:

~~According to claim 26, data~~ <u>Data</u> packets are prioritised for reading-out from the first queue EDF and the second queue FIFO. Advantageously, a blocking of data packets in one queue can be avoided by choice of a priority-strategy, which guaranties to a certain extend read-outs of data packets from both queues.

Please replace the paragraph beginning at page 10, line 24 with the following amended paragraph:

~~According to claim 27, deadline~~ <u>Deadline</u> violations can be detected. Advantageously, this allows a triggering of countermeasures in order to guarantee the real-time processing of the data packets.

Please replace the paragraph beginning at page 10, line 28 with the following amended paragraph:

~~According to claim 29, an~~ <u>An</u> adaptation of payload data packets is performed. This allows the keeping of delivery deadlines for data packets, in particular in the case of congestion or traffic load peaks. It supports furthermore an efficient use of system resources, and it can avoid rejection or dropping of data packets.

Please replace the paragraph beginning at page 11, line 4 with the following amended paragraph:

~~According to claim 29 admission control parameters, and according to claim 30~~ <u>Admission control parameters and</u> synchronisation control parameters are received from a header of an underlying network protocol. This allows payload encryption and authentication, and it supports the use of the so-called Internet protocols IPv4, IPv6 and IPSec, because admission control parameters are not prevented from being read.